

## **IMPROVED METHOD AND SYSTEM FOR A BUILDING DATABASE MANIPULATOR**

### **ABSTRACT OF THE DISCLOSURE**

A Building Database Manipulator to build databases for a variety  
5 of physical environments including definitions of buildings, terrain and  
other site parameters, by scanning in or rapidly editing data. Raster scans  
may be entered or object files in various formats may be used as input.  
Detailed information is stored in the drawing database about the object's  
location, radio frequency attenuation, color, and other physical information  
10 such as electrical characteristics and intersections of the object with the  
ground, floors, ceilings, and other objects when objects are formatted in a  
drawing. The formatting process is strictly two-dimensional in nature, but  
the resulting drawing is a true three-dimensional environment. The user  
sees the three-dimensional building structure by altering the views. The  
15 resulting database may be used in a variety of modeling applications, but is  
especially useful for engineering, planning and management tools for  
in-building or microcell wireless systems. Grouping objects in layers  
allows for simultaneous conversion of all objects in one layer to have  
certain predetermined attributes (e.g., converting objects to be made from  
20 glass versus cement; converting objects within a layer to have a uniform,  
smaller or larger, height or width dimension).